



# **HECTOR INTERNATIONAL AIRPORT TERMINAL AREA STUDY**

*Executive Summary for the  
Request for Qualifications for Architectural and Engineering Services for the Airport  
Terminal Expansion*

## 1. Introduction

Hector International Airport (FAR) initiated a Terminal Area Study (TAS) in January 2022 to define a preferred alternative that will provide the Municipal Airport Authority a functional and financially feasible terminal concept that expands their existing terminal to keep up with the growing passenger demand. To date, the study team has evaluated the existing site, developed commercial enplanement and passenger forecasts that were approved by the Federal Aviation Administration in March 2021, defined facility requirements based on the approved forecasts, conducted multiple terminal alternative design charrettes, and defined a preferred alternative. The study and the formal report will be complete once the financial feasibility, implementation, and public engagement components are finalized which is expected to occur in October 2022. The intent of this executive summary is to provide an overview of the work completed to date as part of this TAS, and a scope of work for the preferred terminal expansion alternative, which was approved by the Municipal Airport Authority board on June 28, 2022.

## 2. Background

FAR is a small-hub primary airport located approximately three miles northwest of the central business district of the City of Fargo in eastern North Dakota. The existing terminal building, constructed in 1986, has undergone many incremental improvements since then to address evolving industry standards and passenger demand. In 2008, the Airport completed a \$15.5 million expansion that included adding a fifth gate, an expanded security screening checkpoint area, and baggage claim area. Since this major capital improvement, the Airport has experienced significant passenger growth requiring further evaluation of terminal expansion.

The terminal area as part of this study includes the apron, commercial terminal, arrivals/departure curb, employee parking, and loading dock as shown in **Figure 2-1**. The landside parking facilities and rental car parking facilities are within the vicinity of the terminal area but were not evaluated for expansion as part of this study and are considered sufficient in size to accommodate future demand.



**Figure 2-1 FAR Terminal Area**

## 2.1. Terminal Area Study Objectives

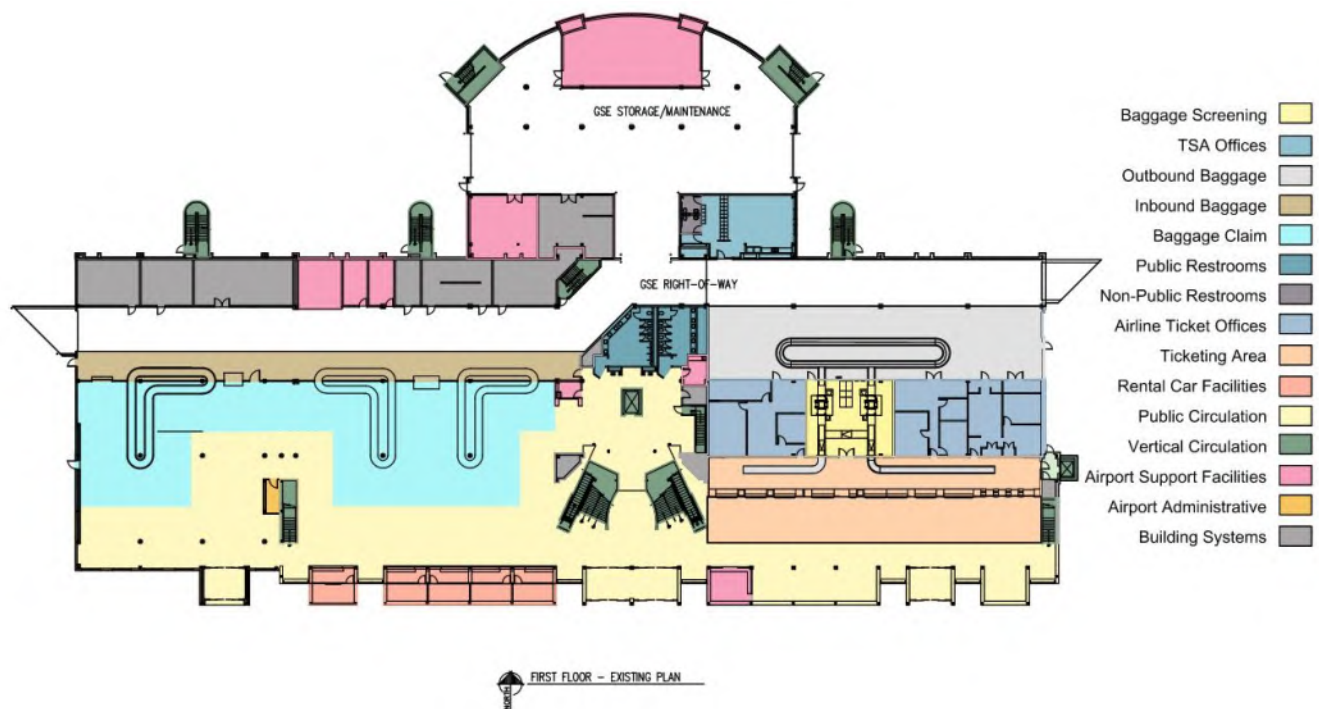
This TAS addresses the following to provide a terminal that directly supports the passengers and commercial fleet that use it:

- Meet the needs of a commercial airport terminal in a manner that facilitates future expansion
- Improve the passenger experience
- Identify code deficiencies and life safety issues
- Right-sizing departure lounges
- Locate restrooms on the secure side
- Locate concessions in secure area
- Passenger security screening
- Baggage security screening
- Outbound baggage system
- Baggage claim and seating
- Tenant offices and operations areas
- Address airline ground service equipment (GSE) and deicing equipment maneuverability areas and storage
- Modernize the terminal to make it operate efficiently and lower ongoing operational cost
- Improve passenger flow
- Improve thermal envelope
- Increase natural light and views
- Provide efficient building systems
- Develop a design character for the airport that draws from the region's history, economy, and landscape.

### 3. Terminal Building

The inventory and evaluation occurred in January 2022 to determine the existing capacity and viability of potential expansions. The passenger terminal building consists of approximately 116,000 square feet on two levels—the lower level accommodates ticketing, airline ticket offices (ATO), baggage screening, baggage claim, and rental car services, and the upper level consists of passenger screening, administrative space, concessions, and gate departure lounges. The Airport does have a basement accommodating utility systems.

**Figure 3-1** shows the terminal’s lower level. The ticketing area, queuing space, ATOs, outbound baggage area, and baggage screening are on the eastern area. Baggage claim and rental car offices are on the western portion of the building. The building’s center is a vertical circulation core with a two-sided staircase, two escalators, and an elevator. The lower level where check-in queuing and baggage claim dwelling occurs is open to the upper-level. Most of the lower level is non-secure except the areas designated for baggage screening and baggage make-up.



**Figure 3-1 Lower-Level Floor Plan**

**Figure 3-2** shows the upper, or concourse, level. The upper level consists of passenger screening, administrative offices, a post-security and pre-security concession area, a café, and departure lounges for each of the five contact gates. In the center on the concourse level is area used for meeters and greeters and passenger screening queuing. The MAA administrative offices and the Transportation Security Administration (TSA) training and break rooms are on the western portion. A gift shop is just west of the vertical circulation core.



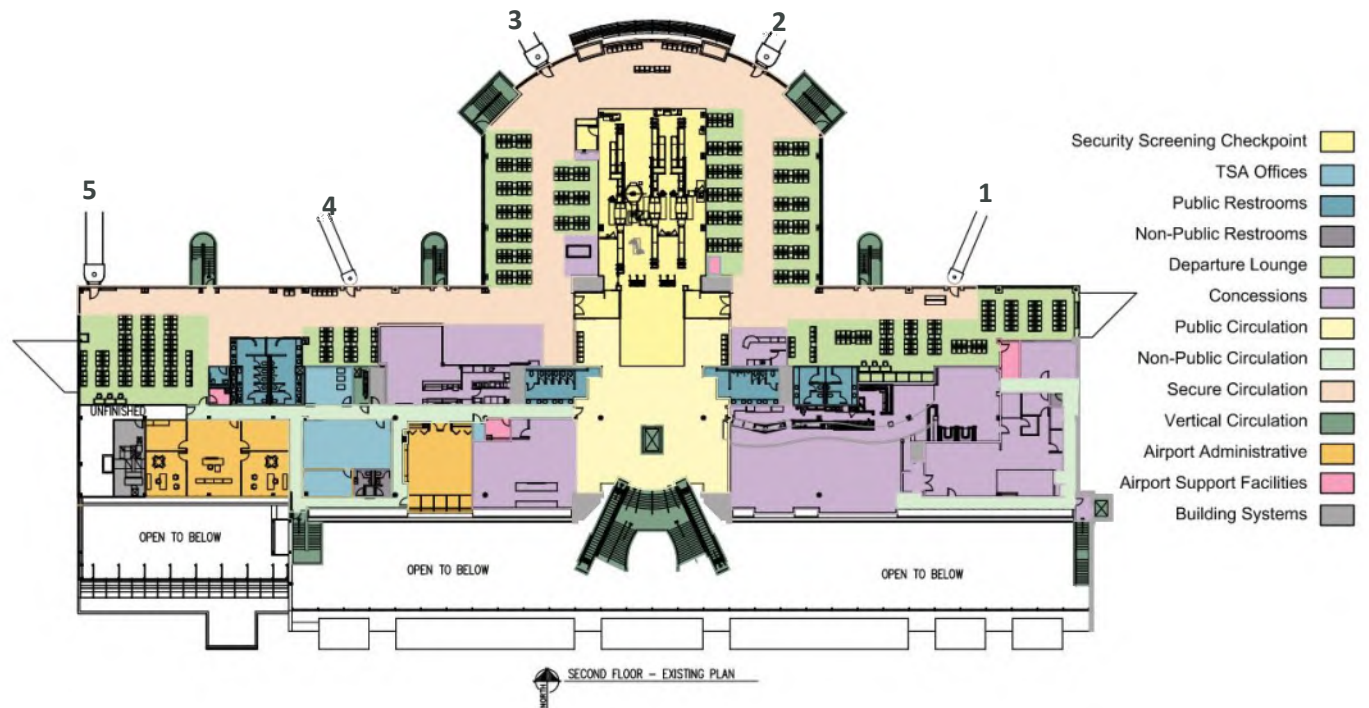
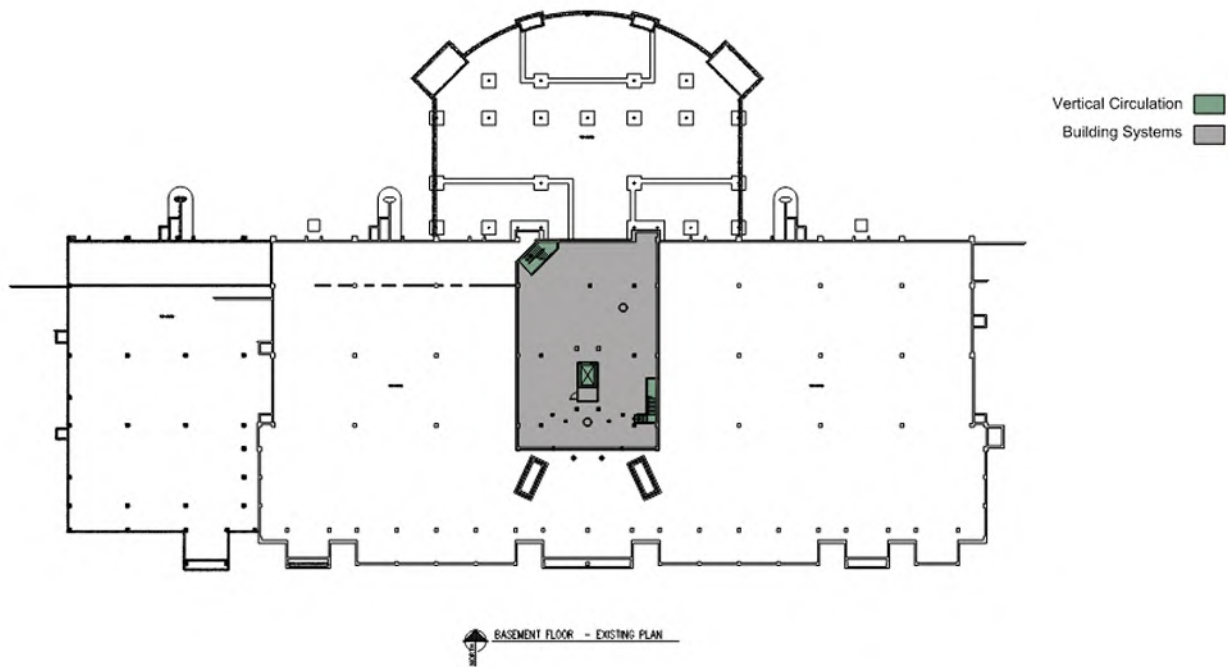


Figure 3-2 Upper-Level Floor Plan

The basement level accommodates utility systems and the elevator maintenance room (**Figure 3-3**). The remainder of the basement area has not been excavated.



**Figure 3-3 Basement Level Floor Plan**

The breakdown of terminal space by functional category and elements is shown in **Table 3-1**.

### FAR - Terminal Areas

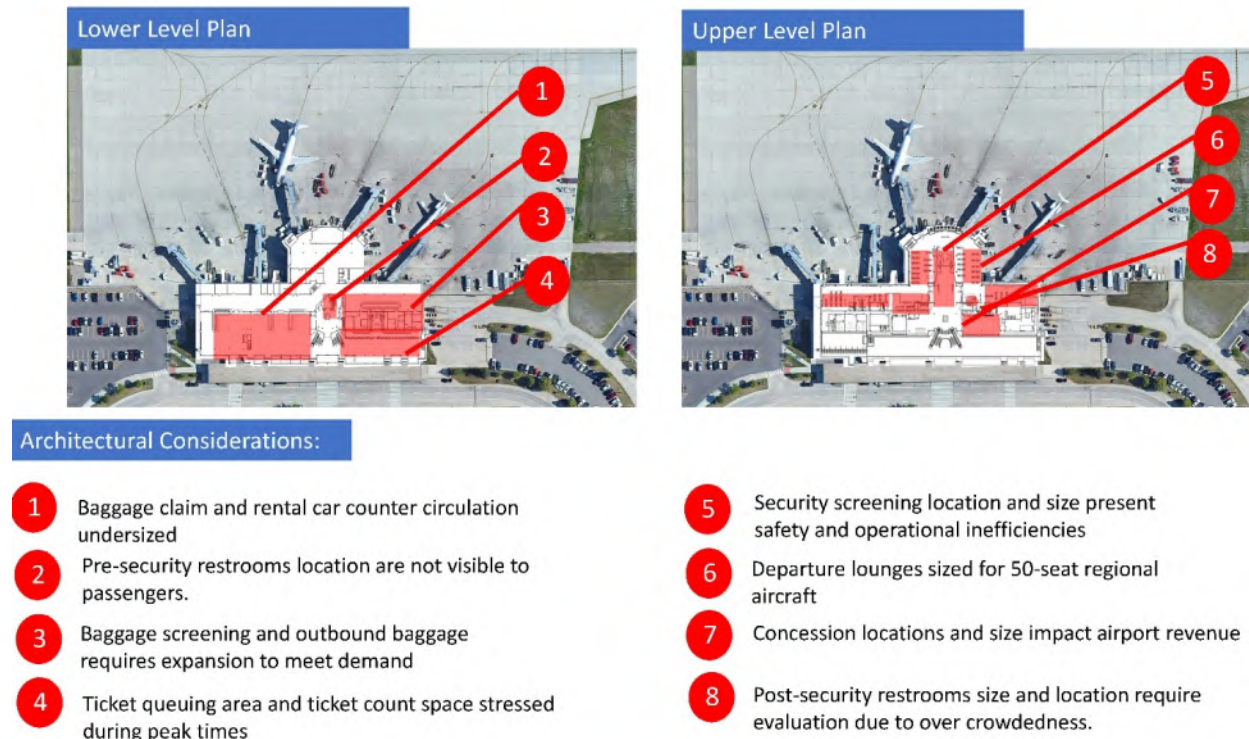
Space Description	Level 1	Level 2
<b>Security Screening Checkpoint</b>		
Number of Lanes (w/PreCheck)	-	3
Checkpoint	-	3,056
Checkpoint Queue	-	737
Checkpoint Exit Lane	-	370
<b>SubTotal SSCP Area</b>	<b>0</b>	<b>4,163</b>
<b>CONCOURSE</b>		
<b>Concourse (Public)</b>		
Gates: Boarding Bridges	-	5
Bridge Gate Departure Lounge	-	8,666
Concession Public Space	-	2,305
Secure Circulation	-	8,780
Mother's Rm	-	31
Restroom Modules	-	2
Restroom Area (M+F)	-	1,242
M+F Restroom fixtures	-	7+7
<b>SubTotal Concourse (Public)</b>	<b>0</b>	<b>21,024</b>
<b>Nonpublic Concourse Areas</b>		
Concession Back of House (BOH)	-	27
<b>SubTotal Nonpublic Concourse</b>	<b>-</b>	<b>27</b>
<b>CONCOURSE GRAND TOTAL</b>	<b>0</b>	<b>21,051</b>
<b>TERMINAL</b>		
<b>General Areas</b>		
Public Circulation	13,030	3,216
Restroom Area (M+F)	841	1,102
M+F Restroom fixtures	7+6	7+6
<b>SubTotal Non-Secure Public Areas</b>	<b>13,871</b>	<b>4,318</b>
<b>Departures Hall</b>		
Public Seating / Lounge	1,112	-
Ticket Queue	2,469	-
Kiosks	6	-
<b>SubTotal Ticketing</b>	<b>3,581</b>	<b>0</b>
<b>Arrivals Hall</b>		
Public Seating / Lounge	6,074	-
Bag Claim Carousel, Floor Area & Oversize	1,448	-
Bag Claim Carousel Frontage	291	-
Bag Claim Carousel (Flat Plate)	3	-
<b>SubTotal Public Baggage Areas</b>	<b>7,522</b>	<b>0</b>
<b>Ancillary Services</b>		
Concession Public Space	-	5,318
<b>SubTotal Ancillary Space</b>	<b>0</b>	<b>5,318</b>
<b>SubTotal Non-secure Public</b>	<b>24,974</b>	<b>9,636</b>

Space Description	Level 1	Level 2	Basement
<b>NONPUBLIC AREAS</b>			
<b>Baggage Areas</b>			
EDS Devices	2	-	-
TSA Bag Screening Floor Area	1,088	-	-
Outbound Baggage	4,251	-	-
Inbound Baggage	2,398	-	-
<b>SubTotal Baggage</b>	<b>7,737</b>	<b>0</b>	<b>0</b>
<b>Leased &amp; Misc Space</b>			
Ticket Agent Positions	20	-	-
Ticket Counter Length	135	-	-
Ticket Counter Area	1,911	-	-
Airline Offices & Operations	3,067	-	-
Car Rental Counter Area	630	-	-
Car Rental Office Area	765	-	-
Concession (BOH)	-	2,072	-
Airport Offices/Information Desk	279	2,580	-
Maintenance / Airport Storage	3,328	119	-
TSA Admin Offices	1,093	910	-
Police	94	-	-
Employee Facilities, (restrooms)	142	193	-
<b>SubTotal Misc Space</b>	<b>11,309</b>	<b>5,874</b>	<b>0</b>
<b>Non-Public Areas</b>			
Training, Badging & Fingerprinting	-	281	-
<b>SubTotal Misc Non-Public Space</b>	<b>-</b>	<b>281</b>	<b>-</b>
<b>SubTotal Non-secure Non-Public</b>	<b>19,046</b>	<b>6,155</b>	<b>0</b>
<b>TERMINAL GRAND TOTALS</b>	<b>44,020</b>	<b>15,791</b>	<b>0</b>
<b>PRORATED AREAS</b>			
<b>Building Support</b>			
Building Systems and Major Chases	4,325	830	5,129
Vertical Circulation	2,924	272	-
Non-Public Circulation	79	2,091	-
Unfinished or GSE Right of Way	15,223	672	-
<b>SubTotal Bldg Support Space</b>	<b>22,551</b>	<b>3,865</b>	<b>5,129</b>
<b>TOTAL TERMINAL FACILITY AREA</b>	<b>66,571</b>	<b>44,870</b>	<b>5,129</b>

Table 2-1 FAR Existing Space Program

### 3.1. Initial Elements of Consideration

The initial assessment of the facility resulted in the identification of several elements to be addressed as part of the TAS as indicated in **Figure 3-4**.



**Figure 3-4 Initial Elements of Consideration**

1. **Baggage Claim and Rental Car Circulation:** The existing space allocated for passengers waiting for bags is undersized and conflicts with passengers queuing at the rental car counters. The study evaluated how designated queuing systems can be implemented and alternatives for expanding the baggage claim area.
2. **Pre-Security Restrooms:** Pre-security restrooms on the lower level are behind the central vertical circulation core posing wayfinding challenges for arriving passengers.
3. **Baggage Screening and Outbound Baggage:** The amount of space currently allocated for outbound baggage presents operational challenges with baggage backflow during peak times and oversized baggage handling.
4. **Ticket Counter Queuing and Ticket Counter Space:** The ticket counters present challenges during peak times as queuing extends to the southern wall and entrance vestibules causing significant circulation issues. Additionally, interviews with airlines suggests additional full-service counter positions are required for future growth.
5. **Security Screening Checkpoint:** The security screening checkpoint just completed the addition of a third lane increasing passenger flow rates from ~300 to ~540 passengers per hour. Although this is sufficient for short- to mid-term demand, more space may be required in the future for a fourth



lane. Additionally, checkpoint queuing currently extends to the vertical circulation core during peak times causing a major safety concern as the passengers wait by moving escalators. In addition to the overall size of the security screening checkpoint, the general location of the checkpoint causes gridlock before and after the checkpoint.

6. **Departure Lounges and Secure Side Circulation:** The current departure lounges were sized to accommodate regional aircraft and not intended to service 200 passenger aircraft. As airlines continue to service FAR with mainline aircraft, the existing departure lounge space becomes undersized very quickly. Additionally, existing passenger circulation on the secure side presents challenges during boarding procedures as the departure lounges and PBB door are separated by the primary passenger circulation corridor.
7. **Concessions:** Currently, the largest concession offering is pre-security and underutilized. The size, location, and type of concessions will be evaluated as part of this study to determine how the Airport can maximize their concession revenue.
8. **Post-Security Restrooms:** This terminal expansion requires an evaluation on existing and proposed restroom facilities post-security. In addition to standard male, female, and family restrooms, the study team also considered the location for a Service Animal Relief Area, all-gender restrooms, and nursing mothers' stations.

#### 4. Enplanements and Peak Hour Forecasts

The forecast used for this Terminal Area Study was a multivariate forecasting methodology, a type of regression analysis to determine future enplanement activity. The two variables used for this update were the population and employment trends for the Fargo-Moorhead metro area. If there is a high correlation between variables, then a forecast can be created which utilizes this relationship. The prediction ability of a given forecast is measured by the  $R^2$  value, where 0 indicates no relationship and 1 indicates a perfectly influential relationship. The historical passenger enplanements at FAR were compared to the independent variables shown in **Table 4-1**, along with their  $R^2$  values. These variables were compared to the T100 database records, as the reporting year is the same instead of the TAF, which reports the federal fiscal year. Each of these variables report a strong correlation between local socioeconomics and Airport activity with the multivariate having the strongest relationship.

**Table 4-1 Regression Analysis Variables**

Independent Variable	$R^2$ Value
Population	0.863
Employment	0.883
Multivariate	0.886

**Notes:** 1: Includes the population and employment variables and the adjusted  $R^2$  value is shown due to the use of multiple variables

When the multivariate variable is used to create an updated forecast, this shows a growth from 472,157 enplanements in 2019 to 748,738 enplanements in 2041. This is a Compound Annual Growth Rate (CAGR) of 2.12 percent which is considerably lower than historical trends would indicate. However, if the past decade is isolated, then the CAGR of 2009 to 2019 is revealed to be 3.08 percent. Therefore, while the updated multivariate forecast is more conservative than the past few decades may predict, the lower growth in the last ten years and the continued recovery from COVID related

impacts are also considered in selecting this methodology of forecasting future activity. The projected number of enplanements for the planning period can be seen in **Table 4-2**.

**Table 4-2 Enplanement Forecast**

Year	Enplanements
2019	472,157
2021	482,252*
2026	549,930
2031	615,818
2036	681,781
2041	748,738
CAGR	2.12%

**Notes:** \*This is the level of activity predicted by the regression model and does not reflect the actual enplanements, which were determined in the previous section.

Enplanements are typically more demanding on the facilities they use than arriving passengers. Enplanements were isolated and the future enplanements forecasted were used to forecast future peaking characteristics. For this peak hour forecast, the average departing load factors for March 2019 were applied to the March 14, 2019 departing seats to estimate the number of daily enplanements. The estimated enplanements on March 14, 2019 were calculated to be 3.7% of the total peak month enplanements. This percentage was applied to the forecasted year to get the estimated peak day enplanements. On March 14, 2019 peak hour enplanements were 21.1% of the total day's enplanements. This percentage was applied to future years to determine the forecasted peak hour enplanements. The peak hour forecasts are shown in **Table 4-3**.

**Table 4-3 Forecasted Peak Hour Enplanements and Deplanements**

Year	Peak Month Enplanements	Selected Day %	Selected Day Enplanements	Peak Hour % of Daily	Peak Hour Enplanements
2019	44,855	3.7%	1,666	21.1%	352
2026	52,243	3.7%	1,941	21.1%	410
2031	58,503	3.7%	2,173	21.1%	459
2036	64,769	3.7%	2,406	21.1%	508
2041	71,130	3.7%	2,642	21.1%	558

Year	Peak Month Deplanements	Selected Day %	Selected Day Deplanements	Peak Hour % of Daily	Peak Hour Deplanements
2019	44,797	3.7%	1,666	19.8%	333
2026	52,176	3.7%	1,931	19.8%	383
2031	58,428	3.7%	2,162	19.8%	429
2036	64,686	3.7%	2,394	19.8%	474
2041	71,039	3.7%	2,629	19.8%	521

**Notes:** 2019 is shown here as the base year as that was the most recent year to occur during normal conditions.

**Source:** Diio Mi, March 14, 2019 was used as the PMWD.

## 5. Facility Requirements

Terminal facility requirements were developed based on meetings with FAR staff, TSA, concessionaires, airlines, and rental car companies, a walk-through site evaluation, knowledge of industry-wide trends, and published guidelines including International Air Transport Association (IATA) *Airport Development Reference Manual (ADRM)*, FAA Advisory Circular (AC) 150/5360-13, *Planning and Design Guidelines for Airport Terminal Facilities*, and ACRP-25 *Airport Passenger Terminal Planning and Design*.

As shown in **Table 5-1**, the FAR requires nine gates to accommodate its future demand. The additional four gates requires the support for additional space in all aspects of the terminal such as ticketing area, security screening checkpoint, baggage screening and outbound baggage make-up, and concessions.

Terminal Functions	Units	Terminal Requirements					
		Exis.	2021	2026	2031	2036	2041
Check-In Hall							
Full-service counter positions	ea	21	24	26	26	26	26
Check-in area (includes active check-in)	sf	1,911	1,670	1,810	1,810	1,810	1,810
Check-in queue area	sf	2,469	3,108	3,621	4,054	4,489	5,740
Kiosks positions	ea	6	8	10	14	16	16
Kiosks footprint area	sf	(incl.)	320	408	571	653	653
Airline ticket office area	sf	3,067	3,312	3,588	3,588	3,588	3,588
Subtotal	sf	7,447	8,410	9,427	10,023	10,539	11,790
Outbound Baggage Screening and Baggage Make-up							
Number of Level 1 EDS units	ea	2	2	3	3	3	3
Level 1 EDS area	sf	(incl.)	1,600	2,400	2,400	2,400	2,400
Number of Level 2 OSR stations	ea	2	1	1	1	2	2
Level 2 OSR area	sf	(incl.)	40	40	40	80	80
Number of Level 3 ETD units	ea	(incl.)	1	1	1	1	1
Level 3 ETD area	sf	(incl.)	100	100	100	100	100
Baggage screening circulation	sf	(incl.)	435	635	635	645	645
TSA baggage screening room	sf	1,088	2,175	3,175	3,175	3,225	3,225
Outbound baggage make-up area	sf	4,251	11,880	12,100	12,100	12,100	12,100
Subtotal	sf	5,339	14,055	15,275	15,275	15,325	15,325
Security Screening Checkpoint							
Checkpoint lanes	ea	3	3	3	3	4	4
Checkpoint screening area	sf	3,056	3,600	3,600	3,600	4,800	4,800
Checkpoint queue area	sf	737	900	900	900	1,200	1,200
Checkpoint exit lane	sf	370	800	800	800	800	800
Subtotal	sf	4,163	5,300	5,300	5,300	6,800	6,800
Departure Lounge							
Equivalent gate (EQA)	EQA	5	9	9	9	9	9
Departure Lounge	sf	8,564	24,562	24,562	24,562	24,562	24,562
Podium and Queue Area	sf	(incl.)	1,755	1,755	1,755	1,755	1,755
Boarding Corridor Area	sf	(incl.)	1,890	1,890	1,890	1,890	1,890
Subtotal	sf	8,564	28,207	28,207	28,207	28,207	28,207
Baggage Claim and Inbound Baggage Handling							
Number of carousels	ea	3	2	2	3	3	3
Claim area (carousels)	sf	7,521	4,600	4,600	6,900	6,900	6,900
Baggage service offices	sf	0	400	400	480	480	560
Inbound baggage offload area	sf	2,398	3,700	4,300	4,700	5,200	5,600
Subtotal	sf	9,919	8,700	9,300	12,080	12,580	13,060
Concessions							
Pre-secure concessions							
Food & Beverage	sf	4,021	900	1,150	1,375	1,575	1,800
Retail	sf	1,297	175	250	325	425	550
Post-secure concessions							
Food & Beverage	sf	2,094	2,700	3,450	4,125	4,725	5,400
Retail	sf	211	525	750	975	1,275	1,650
Concessions support and storage							
Food & Beverage support	sf	2,099	900	690	825	945	1,080
Retail support	sf	0	105	100	130	170	220
Rental car concessions							
Rental car offices	sf	1,395	1,900	2,090	2,299	2,529	2,782
Queuing area	sf	0	400	400	400	400	400
Subtotal	sf	11,117	7,605	8,880	10,454	12,044	13,882
Restrooms							
Pre-security men fixtures	fixtures	14	8	8	9	9	10
Pre-security women fixtures	fixtures	12	12	12	14	14	15
Pre-security restroom area	sf	1,760	1,400	1,400	1,610	1,610	1,750
Post-security men fixtures	fixtures	7	10	10	11	12	14
Post-security women fixtures	fixtures	7	15	15	17	18	21
Post-security restroom area	sf	1,116	1,750	1,750	1,960	2,100	2,450
Janitor closet area	sf	238	155	200	200	200	200
Family restroom module area	sf	71	280	280	280	280	280
Nursing room	sf	31	80	80	80	80	80
Animal service relief area	sf	0	0	200	200	200	200
Subtotal	sf	3,216	3,665	3,910	4,330	4,470	4,960
	men fixtures	21	18	18	20	21	24
	women fixtures	19	27	27	31	32	36
Support Functions							
TSA administration and staff support	sf	2,284	2,801	2,801	2,801	2,801	2,801
Operations and maintenance	sf	3,447	4,764	5,260	5,565	5,787	5,997
Airport administrative areas	sf	3,009	4,000	4,000	4,000	4,000	4,000
Information desk	sf	279	300	300	300	300	300
Lounge/Sensory Room/Coat Check	sf	0	750	750	750	750	750
Loading dock, trash/recycling	sf	(incl.)	1,446	1,528	1,627	1,710	1,781
Subtotal	sf	9,019	14,060	14,639	15,043	15,347	15,629
Circulation							
Public Circulation	sf	17,358	11,934	13,023	14,365	15,439	16,454
Secure Public Circulation	sf	8,780	14,200	14,200	14,200	14,200	14,200
Non-Public Circulation	sf	2,170	2,147	2,404	2,555	2,638	2,743
Meeters/Greeters	sf	(incl.)	1,320	1,320	1,980	1,980	1,980
Subtotal	sf	28,308	29,601	30,947	33,100	34,258	35,377
Other Areas							
GSE Right-of-Way	sf	12,170	11,440	18,304	18,304	18,304	18,304
GSE Storage and Maintenance	sf	3,053	4,784	5,035	5,352	5,583	5,801
Vertical circulation	sf	3,196	4,406	5,007	5,254	5,434	5,604
Building Systems and Utilities	sf	10,284	11,050	17,680	17,680	17,680	17,680
Subtotal	sf	28,703	31,681	46,027	46,591	47,001	47,390
TOTAL AREA		116,570	151,285	171,912	180,403	186,572	192,420
Estimated surplus/deficiency (-) compared with existing facility			34,715	55,342	63,833	70,002	75,850

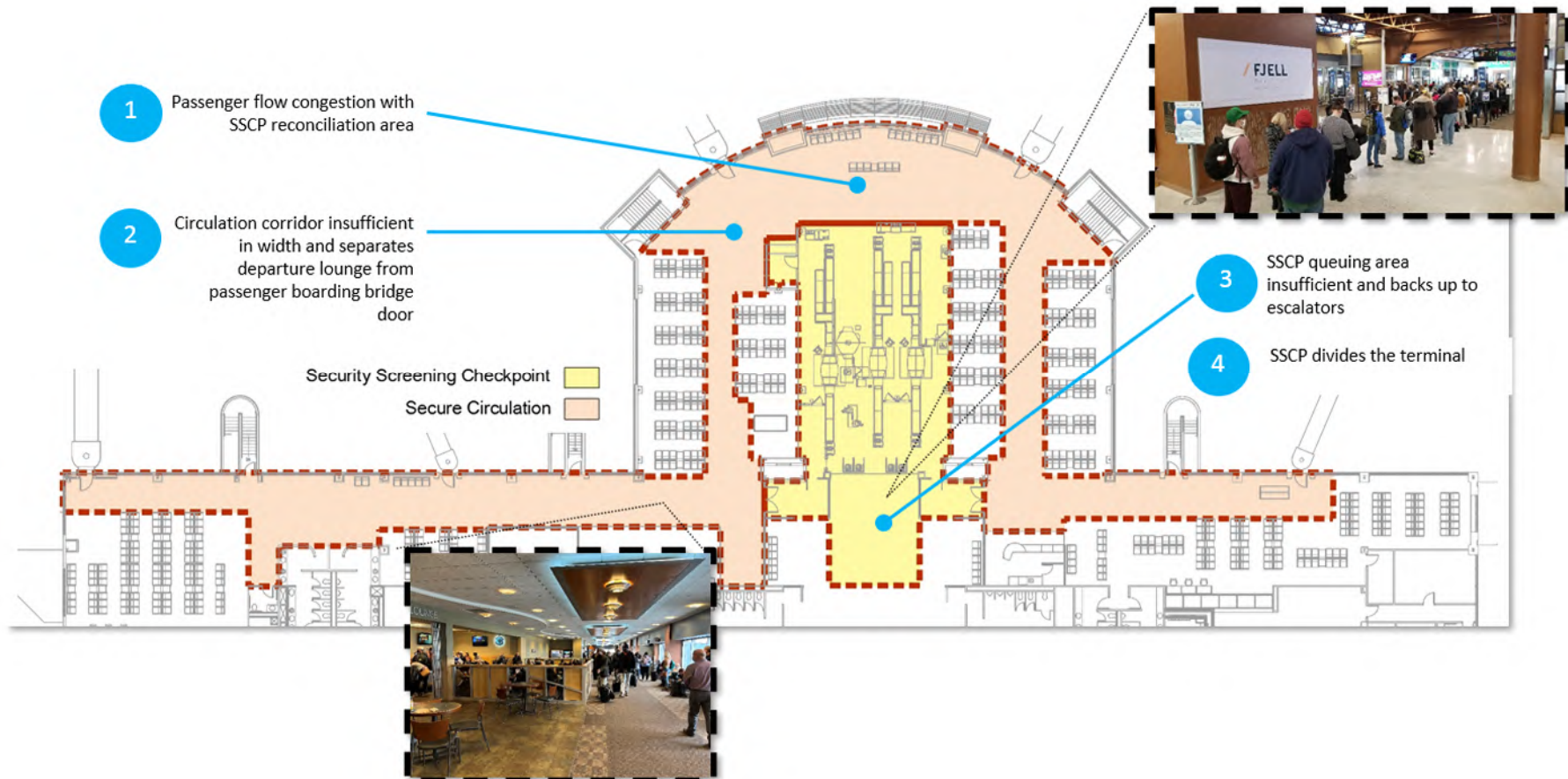
Table 4- 1 FAR Facility Requirements

## 6. Preferred Alternative

Three expansion alternatives were developed for the concourse expansion that met the development goals and achieved the proposed requirements. Additionally, two ticketing area alternatives were evaluated with the intent to incorporate the preferred ticketing area concept into the preferred expansion alternative. These alternatives were then evaluated against certain criteria defined by Airport.

The concourse expansion alternatives had specific focus on secure passenger circulation, departure lounges, and the security screening checkpoint (SSCP). As mentioned in previous sections, the existing secure circulation corridor separates the departure lounges and the boarding area instead of the standard layout of having the circulation corridor behind the departure lounge space and boarding area. Additionally, the security screening checkpoint's reconciliation area causes significant gridlock near Gates 2 and 3. This condition is amplified when these two gates are in the process of boarding. As you approach the SSCP from the nonsecure side, insufficient space for queuing creates congestion and safety hazards as queuing often extends to the vertical circulation core. **Figure 6-1** shows how the layout prevents smooth circulation beyond and before the checkpoint.





**Figure 6-1** Existing Circulation Conditions

The three alternatives were presented to the Municipal Airport Authority board on June 28, 2022 with a recommendation to proceed with one of the alternatives for financial feasibility and implementation. The alternative that was approved is shown in full PDF pages at the end of this summary. The conceptual scope of work of the preferred alternative includes:

**Upper-Level:**

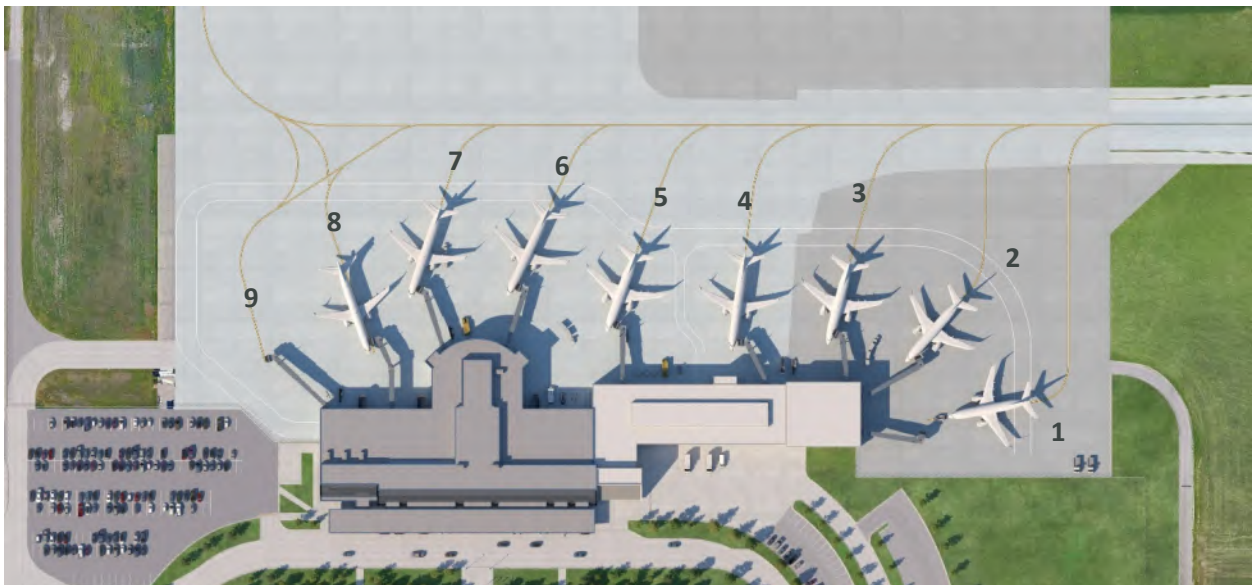
- In a strategically phased approach, construct an estimated 70,000 SF four-gate expanded concourse to the east of the existing terminal building. All gates and departure lounges should be flexible to accommodate ADG III aircraft. Existing Gate 1 should also be relocated to the expanded concourse to open up the existing Gate 1 departure lounge for passenger circulation. The expanded concourse is to include current airport industry trends aimed to improve the passenger experience and sustainability measures.
- Relocate the SSCP to the pre-secure concessions space currently to the right of the checkpoint. This space will allow for up to four lanes and close to 2,400 SF of queuing space. The existing SSCP space is to be converted into post-secure concessions space. The existing queuing space for the SSCP is proposed to be converted into the exit lane.
- Relocate airport administrative offices to the expanded concourse. The existing airport administrative space is to be converted into TSA administrative offices and departure lounge space for existing Gates 4 and 5.
- Convert the existing board room into pre-secure concessions and/or meeters and-greeters space.
- Make the public restrooms on the upper-level secure restrooms for passengers who have already been screened.
- Relocate the restroom module adjacent to Gates 4 and 5 to existing administrative space to add more departure lounge space for Gates 4 and 5.
- Construct an estimated 2,000 SF expansion on the west end of the existing terminal for future Federal Inspection Services activity. The Airport has consulted with United States Customs and Border Protection and are in the process of getting this hybrid layout approved.

**Lower-Level:**

- Expand the ticketing area to accommodate 12 additional full-service positions and additional airline ticket offices.
- In a phased approach, relocate the existing ticket counters and baggage screening belts behind the counters back to the existing wall separating the ticket counters and baggage screening room to provide an additional five-feet of queuing space in the ticketing area.
- Expand the baggage screening room to accommodate three explosive detective system machines.
- Expand the outbound baggage make-up area and baggage system to accommodate two carousels and connectivity into the expanded baggage screening room.

- Modify public restrooms on the lower-level to improve wayfinding to and from the entrance/atrium for passengers and airport visitors.
- Add a concessions receiving and screening room in the expanded concourse area where concessions can be delivered, screened, and transferred to the upper-level.
- Construct an airside elevator adjacent to existing Gates 1 and 2 to accommodate wheelchair and freight.
- At the end of their useful life, relocate baggage carousels 1 and 2 to provide at least 30-feet apart for sufficient dwelling space for arriving passengers.

This preferred alternative design process will include teaming with a Construction Manager. Accommodations for milestone checksets and continuous collaboration during design will be necessary to provide accurate budgets and plan for seamless phasing to keep the airport terminal fully functional through construction. As stated, please refer to the attached PDFs for conceptual floor plans of the preferred alternative. Additionally, below are massing diagrams of the preferred alternative.

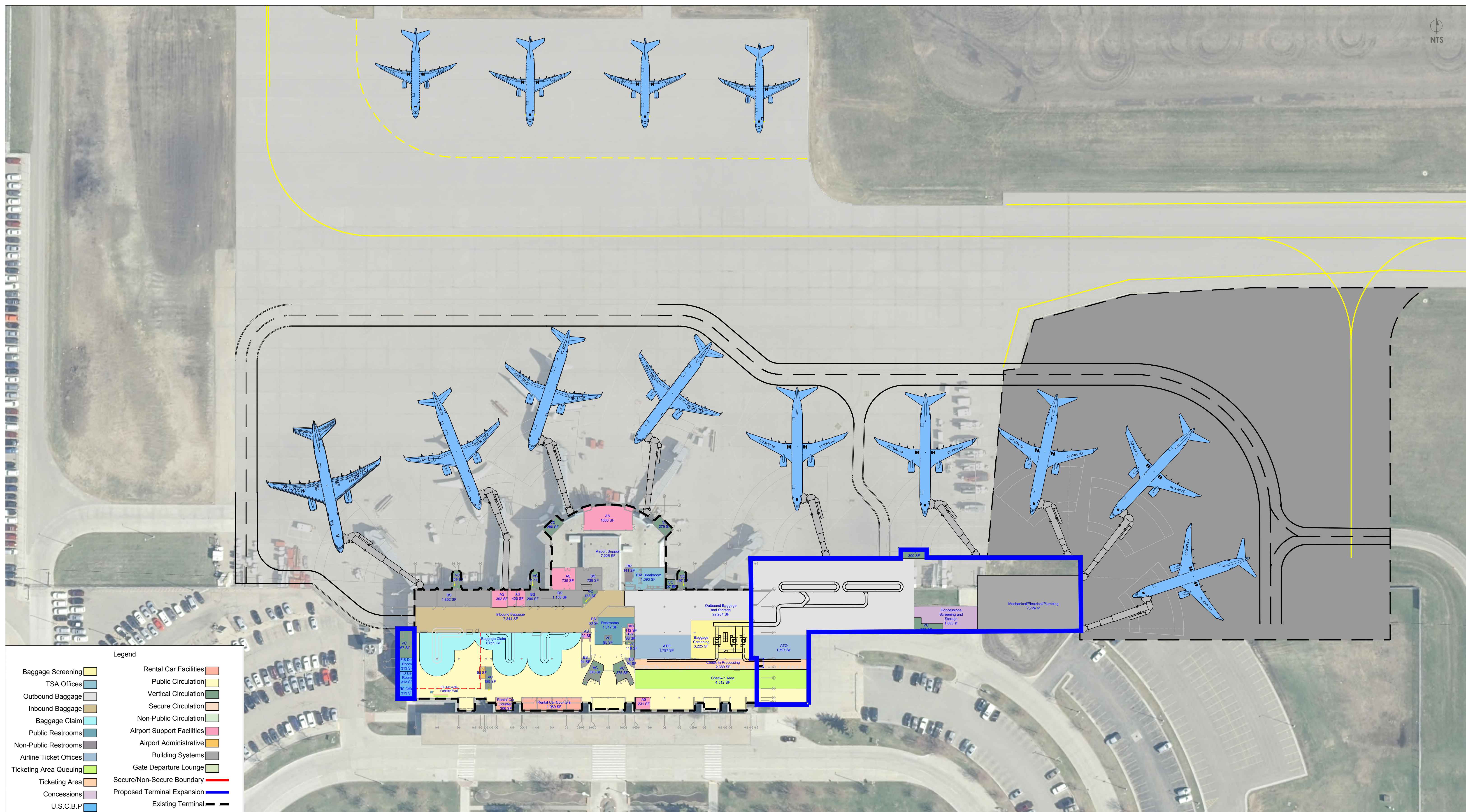


**Figure 6-2 Preferred Alternative Plan View**



























**Figure 6-3** Preferred Alternative Looking Southwest









- |                        |   |                             |   |
|------------------------|---|-----------------------------|---|
| Baggage Screening      |  | Rental Car Facilities       |  |
| TSA Offices            |  | Public Circulation          |  |
| Outbound Baggage       |  | Vertical Circulation        |  |
| Inbound Baggage        |  | Secure Circulation          |  |
| Baggage Claim          |  | Non-Public Circulation      |  |
| Public Restrooms       |  | Airport Support Facilities  |  |
| Non-Public Restrooms   |  | Airport Administrative      |  |
| Airline Ticket Offices |  | Building Systems            |  |
| Ticketing Area Queuing |  | Gate Departure Lounge       |  |
| Ticketing Area         |  | Secure/Non-Secure Boundary  |  |
| Concessions            |  | Proposed Terminal Expansion |  |
| U.S.C.B.P              |  | Existing Terminal           |  |